

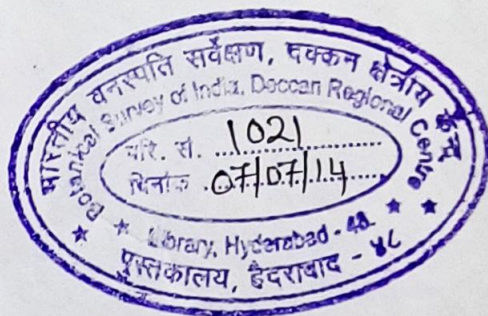
FLORA OF ANDHRA PRADESH

Volume 2

Rubiaceae – Ceratophyllaceae

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ASTERACEAE (*nom. alter.* COMPOSITAE)

C. PRABHAKAR RAJU & R.R. VENKATA RAJU

1. Flowers all tubular or the outer only ligulate, sap watery, pappus other than silky :
2. Involucral bracts 1-seriate :
 3. Heads homogamous :
 4. Calyculous bracts present, florets other than pink :
 5. Plants glabrous, leaf margin entire, florets white. **Kleinia**
 5. Plants pubescent, leaf margin other than entire, florets yellow to orange yellow :
 6. Leaves deeply dissected (atleast the upper ones) style branches gradually lanceolate towards apex **Gynura**
 6. Leaves not dissected, rarely lyrate, style branches triangular at apex **Crassocephalum**
 4. Calyculous bracts absent, florets pink **Emilia**
 3. Heads heterogamous :
 7. Heads rayed :
 8. Leaves pinnatisect, plants erect herbs **Senecio**
 8. Leaves simple, plants climbing shrubs **Cissampelopsis**
 7. Heads not rayed **Erechtites**
2. Involucral bracts more than 1-seriate :
 9. Heads homogamous, not rayed, pappus present :
 10. Leaves opposite, rarely upper ones alternate :
 11. Pappus of very short scales :
 12. Involucral bracts broad, achenes 3-ribbed, pappus scales clavate **Adenostemma**
 12. Involucral bracts narrow, achenes 5-angled, pappus scales paleaceous **Ageratum**
 11. Pappus of long hairs :
 13. Peduncles pubescent, outer involucral bracts ovate :
 14. Leaves ovate-lanceolate, outer involucral bracts glabrous, achene 3-ribbed **Eupatorium**
 14. Leaves broadly ovate, outer involucral bracts pubescent, achenes 5-ribbed **Chromolaena**
 13. Peduncles densely glandular, outer involucral bracts lanceolate **Ageratina**
 10. Leaves alternate :
 15. Involucral bracts not spinescent, style branches elongated :
 16. Heads subtended by leafy bracts, plants rhizomatous **Elephantopus**

16. Heads not subtended by leafy bracts, plants non rhizomatous **Vernonia**
15. Involucral bracts spinescent, style branches not elongated :
17. Style branches thickened towards base :
18. Involucral bracts spinescent :
19. Heads simple, leaves not spinescent, dentate or
lyratly lobed **Oligochaeta**
19. Heads compound, leaves spinescent, deeply lobed . **Echinops**
18. Involucral bracts aristate-acuminate or acuminate :
20. Heads many-flowered, usually solitary or few :
21. Pappus of slender hairs, achenes 5-angled . . **Saussurea**
21. Pappus of stiff paleaceous scales, achenes not angled,
striated **Tricholepis**
20. Heads 4-5-flowered, in compound corymbs . **Goniocaulon**
17. Style branches not thickened towards base **Dicoma**
9. Heads heterogamous, rayed or not (except *Caesulia* and *Lagascea*), pappus
present or absent :
22. Receptacle epaleaceous :
23. Leaves opposite **Flaveria**
23. Leaves usually alternate :
24. Style arms truncate, apex of involucral bracts scarious .
25. Plants prostrate herbs, heads solitary, achenes
hairy along ribs **Centipeda**
25. Plants erect herbs, or shrubs, heads in racemes or
panicles, achenes glabrous **Artemesia**
24. Style arms flattened or linear-obtuse, apex of involucral bracts not
scarious :
26. Anther base obtuse :
27. Pappus of many slender hairs, setaceous :
28. Female florets ligulate (atleast marginal ones),
ligule exceeds the pappus **Erigeron**
28. Female florets not ligulate, if present do not
exceed the pappus **Conyza**
27. Pappus absent or a lacineate cup :
29. Receptacle convex, achenes glandular :
30. Plants prostrate, leaves lyratly pinnatifid, heads solitary,
achenes not margined, ribbed **Grangea**
30. Plants erect, leaves not pinnatisect, heads in racemose
panicles, achenes strongly margined . . **Dichrocephala**
29. Receptacle cup like, achenes glabrous **Cyathocline**
26. Anther base sagittate or tailed :

31. Heads aggregated into dense globose or ovoid clusters :
32. Herbs aromatic, stems winged, or atleast leaves decurrent,
florets pink **Sphaeranthus**
32. Heads not aromatic, stems not winged, florets white **Blepharispermum**
31. Heads not aggregated into clusters :
33. Stems winged (except **Laggera aurita**) :
34. Plants diffuse or prostrate herbs, pappus absent **Epaltis**
34. Plants erect herbs, pappus present **Laggera**
33. Stems not winged :
35. Plants marshy herbs, heads solitary, white **Caesulia**
35. Plants other than marshy, heads in racemes :
36. Heads rayed :
37. Pappus 2-seriate, outer row of scales forming cup, inner of setaceous
free hairs. **Pulicaria**
37. Pappus 1-seriate, of setaceous free hairs **Pentanema**
36. Heads not rayed :
38. Involucral bracts broad, scarious :
39. Plant parts densely white-woolly, bisexual
florets usually sterile **Anaphalis**
39. Plant parts sparsely white-woolly, bisexual
florets fertile **Gnaphalium**
38. Involucral bracts other than above :
40. Anther base sagittate, leaves glabrous **Blumeopsis**
40. Anther base tailed, leaves other than glabrous :
41. Stem woody, involucral bracts broad, rigid **Pluchea**
41. Stem herbaceous, involucral bracts narrow, slender **Blumea**
22. Receptacle paleaceous :
42. Leaves opposite, all cauline :
43. Inner involucral bracts partly or completely enclosing the achenes of ray
florets, pappus of ray and disc florets absent, bisexual florets sterile, ray
florets fertile :
44. Inner involucral bracts partly or completely enclosing the achenes,
spinescent, outer involucral bracts, lanceolate to ovate-lanceolate,
pubescent **Acanthospermum**
44. Inner involucral bracts partly enclose the achenes, not spinescent, outer
involucral bracts spatulate, densely glandular **Siegesbeckia**
43. Inner involucral bracts do not enclose the achenes of ray florets, almost
free from achenes, pappus of either ray and disc florets present or absent,
bisexual florets fertile, ray florets usually sterile :
45. Heads one-flowered, clustered together or aggregated in compound
fashion, subtended by leafy bracts, ligule absent **Lagascea**

45. Heads separate, not aggregated in compound fashion, not subtended by leafy bracts, ligule present :
46. Pappus of awns :
47. Achenes dimorphic, of ray winged, of bisexual florets not winged, involucre bracts rigid, pappus glabrous **Synedrella**
47. Achenes monomorphic, not winged, involucre bracts soft, pappus awns otherwise :
48. Pappus awns plumose, achenes densely silky **Tridax**
48. Pappus awns retrorsely barbellate, achenes hispid or glabrous :
49. Achenes rostrate **Cosmos**
49. Achenes eerostrate **Bidens**
46. Pappus of scales, bristles or absent :
50. Receptacle conical :
51. Style branches truncate, heads rather large, achenes usually ciliate along margins **Spilanthes**
51. Style branches acute, heads small, achenes not ciliate along margins **Galinsoga**
50. Receptacle flat or slightly convex :
52. Bisexual florets completely enclosed by palea, achenes curved and narrowly beaked at apex **Sclerocarpus**
52. Bisexual florets free from palea, achenes straight, truncate to obtuse at apex :
53. Stems erect, heads on conspicuous strong peduncles, ligules yellow :
54. Leaf base sub-amplexicaul, palea obtuse at apex, tube of ray floret multi-cellular hairy and glandular **Guizotia**
54. Leaf base obtuse or attenuate-cuneate, palea acuminate, tube of ray floret unicellular hairy, eglandular **Wedelia**
53. Stems often decumbent, heads subsessile to sessile or with weak peduncles, white :
55. Bisexual florets white, palea narrow, acute to gland tipped :
56. Involucre bracts many **Eclipta**
56. Involucre bracts 4, 2-seriate **Enhydra**
55. Bisexual florets yellow, palea broad, dentate at apex **Blainvillea**
42. Leaves alternate, radical and cauline or cauline only :
57. Prostrate, decumbent or scapigerous low herbs :
58. Pappus of awns :
59. Awns retrorsely barbellate, involucre hemispherical **Glossogyne**
59. Awns glabrous, involucre funnel form **Glossocardia**
58. Pappus absent **Chrysanthellum**

57. Erect herbs to sub-shrubs :
60. Anthers black, achenes winged, leaves auricled at base **Verbesina**
60. Anthers translucent, achenes not winged, leaves not auricled :
61. Heads unisexual, female heads eligulate 2-flowered, covered by hooked spines, anemophilous **Xanthium**
61. Heads bisexual, female floret ligulate, entomophilous **Parthenium**
1. Flowers all ligulate, sap milky, pappus fine capillary or silky :
62. Achenes slightly or perfectly beaked and narrowed at apex :
63. Pappus homogenous **Lactuca**
63. Pappus heterogenous **Launaea**
62. Achenes not beaked, truncate and narrowed at both ends **Sonchus**

ACANTHOSPERMUM Schrank

Acanthospermum hispidum DC. Prodr. 5 : 522. 1836; Gamble 2 : 704 (476). 1921.

Annual erect herbs, up to 70 cm tall, Leaves opposite, obovate, scabrous on both sides, 3-8 x 1.5-3.5 cm, base cuneate, margin serrate, apex acute. Heads heterogamous, solitary, arranged in the forks of dichotomous branches, florets yellow. Disc florets female sterile, ray florets fertile. Achene spinescent with 2- horn like spines at the top, pappus absent.

Common in waste lands in all districts.

Fl. & Fr. : August - January.

S.K. University campus (ATP), *TP* & *NY* 148; V.P. South (GNT), *VRK* 3542; Bijjur (ADB), *GO* & *PVP* 4873; Mosra-Malkapur Road (NZB), *TP* & *BR* 6091; North Dhone RF (KNL), *RVR* 1618.

ADENOSTEMMA J.R. Forster & J.G.A. Forster

1. Leaves broadly ovate, chartaceous, distinctly dentate to serrate-dentate, achenes more than 4 mm long, minutely glandular to glabrous **A. macrophyllum**
1. Leaves and achenes otherwise **A. lavenia**

Adenostemma lavenia (L.) O. Kuntze, Rev. Gen. Pl. 1 : 304. 1891; Gamble 2 : 677 (476). 1921. *Verbesina lavenia* L. Sp. Pl. 902. 1753. *Adenostemma viscosum* Forst. Char. Gen. Pl. 90. t. 45. 1776; FBI 242. 1882.

Fl. & Fr. : October - January.

Manjeera Barrage (NZB), *CP & BR* 14087.

BLAINVILLEA Cassini

Blainvillea acmella (L.) Philipson in Blumea 6 : 350. 1950. *Verbesina acmella* L. Sp. Pl. 901. 1753. *Blainvillea latifolia* (L.f.) DC. in Wight Contrib. 17. 1834 et Prodr. 5 : 492. 1836; FBI 3 : 305. 1881. *B. rhomboidea* Cass. Dict. Sci. Nat. 29 : 494. 1823; Gamble 2 : 706 (496). 1921.

Annual erect herbs, to 1 m tall, stem terete, striated. Leaves ovate, elliptic or ovate-lanceolate, 2-10 x 1-6 cm, base cuneate, margin coarsely serrate, apex acute to acuminate. Heads solitary or 3, terminal in the forks of dichotomies or in upper axils, white, heterogamous. Achenes obovate, pappus of two unequal short bristles.

Common in wet places at low elevations.

Fl. & Fr. : October - April.

V.P. South (GNT), VRK 5809; Ankusapuram (ADB), GO 4331; Madhavaram RF (KNL), RVR 1652; Manchippa RF (NZB), TP & BR 6014.

BLEPHARISPERMUM Wight

Blepharispermum subsessile DC. in Wight Contrib. Bot. Ind. 11. 1834; FBI 3 : 276. 1881.

Annual erect herbs, to 60 cm tall. Leaves elliptic, 2.5-8.5 x 1-4 cm, base cuneate or obtusely attenuate, margin entire, apex acute or obtusely apiculate. Heads terminal, aggregated into globose clusters, heterogamous, florets white. Achenes obovoid, trigonous, densely ciliate along margins.

Rare in open forests in Medak and Kurnool districts.

Fl. & Fr. : November - January.

Narsapur (MDK), TP & CP 14079.

BLUMEA De Candolle *nom. cons.*

1. Leaf margin toothed, anthers abortive :

2. Plants with globose woolly buds at the base of stem and on roots, bisexual florets multicellular hairy except on the tube **B. oxyodonta**

2. Plant without globose woolly buds, bisexual florets multicellular hairy on lobes and tubes **B. eriantha**

1. Leaf margin otherwise, anthers fertile :

3. Heads solitary or few :

4. Upper most leaves opposite or sub-opposite **B. bifoliata**

4. Upper most leaves alternate **B. obliqua**

3. Heads variously paniculate or clustered :
 5. Receptacle pubescent or pilose :
 6. Heads sessile in interrupted spicate glomerules **B. fistulosa**
 6. Heads peduncled, in compact or lax panicles **B. laciniata**
 5. Receptacle glabrous or fimbriate :
 7. Plant parts (especially leaves) densely silky sericeous :
 8. Bisexual florets pubescent with colleters, achenes ribbed **B. hieracifolia**
 8. Bisexual florets pubescent with multicellular hairs, achenes striated **B. lacera**
 7. Plant parts pubescent or glabrous :
 9. Bisexual florets with pink tinge **B. mollis**
 9. Bisexual florets yellow :
 10. Plant parts with glandular indumentum . **B. membranacea**
 10. Plant parts eglandular **B. virens**

Blumea bifoliata (L.) DC. in Wight Contrib. Bot. Ind. 15. 1834; FBI 3 : 261. 1881; Gamble 2 : 686 (482). 1921. *Conyza bifoliata* L. Sp. Pl. 862. 1753.

Annual erect or ascending villous herbs, to 40 cm tall. Leaves lower ones spatulate or oblanceolate, upper ones obovate or elliptic, 1-10 x 0.5-3 cm, lower leaves attenuate at base, upper ones semiamplexicaul, margin dentate with sharp teeth or entire in the upper most one, apex acute. Heads solitary, axillary and terminal, heterogamous. Achenes oblong, pappus uniseriate.

Common in wet places, especially rice fields in most districts.

Fl. & Fr. : November - June.

Araku (VSKP), GVS 19682 (MH); Nandyal (KNL), SKW 5248 (BLAT).

Blumea eriantha DC. in Wight Contrib. Bot Ind. 15. 1834; FBI 3 : 266. 1881; Gamble 2 : 686 (482). 1921.

Annual erect, strongly aromatic herbs, to 1 m tall, stem brown, striated, globose woolly buds clustered at the base and on roots. Leaves sessile, obovate, 1-10 x 0.5-1 cm, densely silky, base attenuate, margin spinulose dentate, apex obtuse, acute or obtusely apiculate. Heads terminal or axillary, heterogamous. Achenes oblong to elliptic-oblong, pappus setaceous.

Rare along road sides and near fields.

Fl. & Fr. : February - May.

Sathermott (ADB), TP & PVP 4107; Uttoor (ADB), GO & PVP 4604; Peccheruvu (KNL), SKW 4813- 15.

Blumea fistulosa (Roxb.) Kurz in Journ. As. Soc. Bengal 46 : 187. 1877. *Conyza fistulosa* Roxb. Fl. Ind. 3 : 429. 1832. *Blumea glomerata* DC.

in Wight Contrib. Bot. Ind. 15. 1834; FBI 3 : 262. 1881; Gamble 2 : 686 (483). 1921.

Annual erect herbs, to 1 m tall, stem terete, brown. Leaves sessile, elliptic-oblong to oblong, 1.5-5.3 x 0.5-1.4 cm base narrowed, clasped to stem, margin distantly, sharply dentate, apex acute. Heads heterogamous, in compact globose clusters, on spicate panicles. Achenes oblong.

Rare in open forests and along railway tracks in Visakhapatnam and Kurnool districts.

Fl. & Fr. : September - January.

Chelama (KNL), CPR 9941.

Blumea hieracifolia (D. Don) DC. in Wight Contrib. Bot. Ind. 15. 1834; var. **macrostachya** (DC.) Hook. f. Fl. Brit. Ind. 3 : 263. 1881; Gamble 2 : 687 (483). 1921.

Simple or sparingly branched, usually scapigerous herbs. Basal leaves in rosette, oblong to spatulate, regularly shortly dentate, stem-leaves usually smaller and more oblong, often very white-woolly. Heads in close clusters, terminal to the stem or its branches. Achenes ribbed, pubescent at first, then glabrous.

Hills of Visakhapatnam (A.W. Lushington Cf. Gamble).

Blumea lacera (Burm. f.) DC. in Wight Contrib. Bot. Ind. 14. 1834; FBI 3 : 262. 1881; Gamble 2 : 687 (483). 1921. *Conyza lacera* Burm. f. Fl. Ind. 180. t. 59. 1768.

Annual erect aromatic herbs, to 1 m tall. Leaves obovate to elliptic, 1-6 x 0.5-3 cm, attenuate and clasped to stem at base, margin dentate with sharp teeth, apex obtusely apiculate or acute. Heads heterogamous in cymose clusters. Achenes oblong, pappus setaceous.

Rare along streams and slopes in Kurnool district.

Fl. & Fr. : December - April.

Velugode RF (KNL), JLE 23803 (MH).

Blumea laciniata (Roxb.) DC. Prodr. 5 : 436. 1836; FBI 3 : 264. 1881; Gamble 2 : 688 (484). 1921. *Conyza laciniata* Roxb. Fl. Ind. 3 : 42. 1832.

Annual erect herbs, to 1 m tall, stem brown. Leaves 1.5-12 x 0.5-5 cm, deeply lobed, lobes oblong or ovate, base clasped to stem, margin dentate, apex acute. Heads in terminal and axillary panicles, heterogamous, yellow. Achenes oblong, ribbed.

Rare on the edges of streams and rocky crevices in Kurnool district.

Fl. & Fr. : December - April.

Nandyal to Chelama (KNL), CPR 9938.

Blumea membranacea DC. Prodr. 5 : 440. 1836.

1. Heads very small, leaves deeply lyrate lobed var. **gracilis**
 1. Heads large, leaves very slightly lobed or not var. **membranacea**

Blumea membranacea DC. var. **gracilis** (DC.) Hook. f. Fl. Brit. Ind. 3 : 265. 1881; Gamble 2 : 687 (483). 1921. *B. gracilis* DC. Prodr. 5 : 443. 1836.

Annual erect aromatic herbs, to 1 m tall. Leaves obovate, 3-11 x 1.5-2.5 cm, lower lyrate, lobed, terminal lobe ovate-elliptic, base attenuate, margin dentate, apex acute. Heads heterogamous, in terminal or axillary panicles, yellow. Achenes oblong, ribbed.

Rare in moist places in Cuddapah district.

Fl. & Fr. : December - February.

Palakonda (CDP), CS 8288.

Blumea membranacea DC. var. **membranacea**.

This variety differs from the earlier having larger heads, leaves slightly lobed or not.

Rare along road sides and waste lands.

Fl. & Fr. : December - March.

Potchera (ADB), GO & DAM 5046.

Blumea mollis (D. Don) Merr. in Philipp. Journ. Sci. (Bot.) 5 : 395. 1910. *Erigeron molle* D. Don Prodr. Fl. Nepal 172. 1825. *Blumea wightiana* DC. in Wight Contrib. Bot. Ind. 14. 1834; FBI 3 : 261. 1881; Gamble 2 : 686 (484). 1921. *B. neilgherriensis* Hook. f. Fl. Brit. India 3 : 261. 1881; Gamble 2 : 686 (483). 1921.

Annual erect aromatic herbs, to 1 m tall, sticky with glandular hairs. Leaves elliptic or obovate, 2-11 x 0.6-4.5 cm, base attenuate to acute, margin dentate or double dentate, entire in the upper leaves, apex acute or obtusely apiculate. Heads heterogamous, purple in terminal panicles. Achenes minutely angled, hairy.

Common in waste lands, road sides and cultivated fields.

Fl. & Fr. : July - March.

Garugudu kona (ATP), TP 958; Alampalli (ADB), TP & PVP 4167; Nallamalais (KNL), JLE 23724 (MH).

Blumea obliqua (L.) Druce in Rep. Bot. Soc. Exch. Club Brit. Isles 4 : 609. 1917. *Erigeron obliquum* L. Mant. Pl. 573. 1771. *Blumea amplexans* DC. in Wight Contrib. Bot. Ind. 13. 1834; FBI 3 : 260; Gamble 2 : 681 (482). 1921.

Annual erect herbs, to 70 cm tall. Leaves ovate-oblong to oblanceolate, 2-8 x 0.5-2.5 cm, base semiamplexicaul to auriculate, margin dentate, apex

acute. Heads terminal, solitary or two, pinkish, heterogamous. Achenes oblong, hairy.

Common weed in wet fields in all districts.

Fl. & Fr. : October - February.

Nittur (ATP), *TP* 1150.

Blumea oxydonta DC. in Wight Contrib. Bot. Ind. 15. 1834; *FBI* 3 : 266. 1861; *Gamble* 2 : 686 (482). 1921.

Annual prostrate herbs, to 30 cm long, white woolly buds clustered at the base and on roots. Leaves radical and cauline, densely white silky and glandular on both surfaces, basal leaves obovate, to 5 x 1.5 cm, base attenuate, upper ones elliptic, base rounded or obtuse, to 1 x 0.5 cm, margin spinous dentate, apex acute. Heads in terminal and axillary, compact or lax few-headed corymbose panicles, yellow, heterogamous. Achenes oblong pubescent.

Rare near streams in Adilabad and Visakhapatnam districts.

Fl. & Fr. : Feb. - June.

Pochera (ADB), *CPR* 13229.

Blumea virens Wall. ex DC. in Wight Contrib. Bot. Ind. 14. 1834 & DC. Prodr. 5 : 439. 1836; *FBI* 3 : 264. 1881; *Gamble* 2 : 687 (483). 1921.

Annual erect herbs, to 1.5 m tall. Leaves lower lyrate lobed, lateral lobes triangular, terminal lobe elliptic-ovate, upper ones obovate to oblanceolate, 1-10 x 0.5-3 cm, base attenuate, margin serrate, apex acute to apiculate. Heads in axillary and terminal lax panicles, yellow, heterogamous. Achenes oblong or elliptic-oblong, ribbed, hairy.

Rare in waste lands, road sides and forest clearings in Kurnool, Warangal, East Godavari and Visakhapatnam districts.

Fl. & Fr. : November - March.

Pakhal (WGL), *ANH* 15928 (MH); Ramanapenta (KNL), *JLE* 23812 (MH); Peccheruvu (KNL), *RVR & PVP* 2162.

BLUMEOPSIS Gagnepain

Blumeopsis flava (DC.) Gagnep. in Bull. Mus. Hist. Nat. Paris 26 : 76. 1920. *Blumea flava* DC. Prodr. 5 : 439. 1836. *Laggera flava* (DC.) Benth. in Clarke Comp. Ind. 90. 1876; *FBI* 3 : 270. 1881; *Gamble* 2 : 689 (485). 1921.

Annual herbs. Leaves ovate-oblong, base cordate and semiamplexicaul, margin coarsely toothed, glabrous. Heads heterogamous in loose paniced cymes, florets yellow. Achenes minute, pale, angled, smooth.

North Circars in forests of Visakhapatnam.

CAESULIA Roxburgh

Caesulia axillaris Roxb. Pl. Cor. 1 : 64. t. 93. 1798; *FBI* 3 : 291. 1881; *Gamble* 2 : 704 (494). 1921.

cauline ones lanceolate to linear, 2-30 x 0.4-13 cm, base clasped to stem, margin spinulosely ciliated, apex obtuse to acute. Heads solitary or fascicled, homogamous. Achenes narrowly obovate to obovate-cuneate, ribbed.

Occasional in waste lands in Anantapur, Kurnool, Nalgonda, Nellore, Visakhapatnam and Hyderabad districts.

Fl. & Fr. : March - May.

Penakacherla (ATP), NY 590; Talakona RF (CTR), GO 2132; Kalvabugga (KNL), RVR 1871; Laxmapur (NZB), TP & BR 6291.

LAGASCEA Cavanilles *nom. cons.*

Lagascea mollis Cav. in Anal. Cienc. Nat. 6 : 332 t. 44. 1803; FBI 3 : 302. 1881; Gamble 2 : 703 (494). 1921.

Annual slender erect herbs, to 50 cm tall. Leaves ovate, 2-5 x 1-3.5 cm, base obtuse, margin serrate, apex acuminate. Heads 1-flowered, aggregated into terminal compound capitulum, subtended by leafy bracts, white. Achenes obovate, 3-angled.

Common weed of waste lands, cultivated fields and road sides.

Fl. & Fr. : September - May.

Upper Ahobilum (KNL), TP & RVR 2726; Amagondapalem RF (ATP), NY 1016; Mangapatnam (CTR), GO & RVR 2451; Manchippa (NZB), TP & BR 6055; Koppanur (GNT), VRK 3251.

LAGGERA C.H. Schultz-Biphotimus ex K.H.E. Koch

1. Stems winged :

2. Anther bases sagittate, achenes villous **L. alata**

2. Anther bases obtuse, achenes puberulous **L. crispata**

1. Stems not winged **L. aurita**

Lagera alata (D. Don) Sch. - Bip. ex Oliver in Trans. Linn. Soc. 29 : 94. 1973; FBI 3 : 271. 1881; Gamble 2 : 689 (485). 1921. *Erigeron alatum* D. Don Prodr. Fl. Nepal 171. 1825.

Annual or perennial, erect pubescent herbs, to 1.5 m tall. Leaves elliptic to oblanceolate, 2.5-10 x 0.5-3 cm, base decurrent, margin denticulate, apex acute. Heads solitary, terminal, purple, heterogamous. Achenes oblong, ribbed.

Rare on hill slopes at high elevations in Rayalaseema and Viskhapatnam districts.

Fl. & Fr. : November - February.

Pennahobilam (ATP), *TP* & *NY* 351; Ramannapenta (KNL), *RVR* & *PVP* 2378; Cuddapah hills, *RHB* 122 (MH).

Laggera aurita (L.f.) Benth. ex Clarke *Compo. Ind.* 92. 1876; *FBI* 3 : 271. 1881; Gamble 2 : 689 (485). 1921. *Conyza aurita* L.f. *Suppl.* 367. 1781.

Annual erect, aromatic herbs., to 80 cm tall. Leaves elliptic-oblongate, 1.5-8 x 1-2.5, base auriculate, margin dentate, apex acute. Heads 3-8 in terminal corymbs, pinkish tinged, heterogamous. Achenes oblong, strongly ribbed.

Common in vacant places and forest edges in all districts.

Fl. & Fr. : September - February.

Sone (ADB), *TP* & *PVP* 4062; Krishna river bank (NLG), *KMS* 9809 (MH); Chandragiri (CTR), *JLE* 10004 (MH).

Laggera crispata (Vahl) Hepper & Wood in *Kew Bull.* 38 : 83. 1983. *Conyza crispata* Vahl, *Symb. Bot.* 1 : 71. 1790. *Laggera pterodonta* (DC.) Sch.-Bip. ex Oliver in *Trans. Linn. Soc.* 29 : 94. 1873; *FBI* 3 : 271. 1881; Gamble 2 : 689 (485). 1921. *Blumea pterodonta* DC. in *Wight Contrib. Bot. Ind.* 16. 1834.

Annual erect aromatic herbs, to 1.2 m tall. Leaves elliptic-lanceolate, densely glandular on both surfaces, 2-12 x 0.4-3.5 cm, base decurrent, margin dentate, apex acute. Heads few- solitary, on slender peduncles at the ends of branches, heterogamous, purple. Achenes oblong, ribbed.

Occasional in forest edges and road sides at high elevations.

Fl. & Fr. : November - February.

Velgode RF (KNL), *SKW* 4816-18 (BLAT), Cuddapah hills, *RHB s.n.* (MH).

LAUNAEA Cassini

1. Plants rhizomatous :

2. Heads clustered at nodes **L. procumbens**

2. Heads in terminal panicles **L. asplenifolia**

1. Plants not rhizomatous **L. sarmentosa**

Launaea asplenifolia (Willd.) Hook. f. *Fl. Brit. Ind.* 3 : 415. 1881.

Prenanthes asplenifolia Willd. *Sp. Pl.* 3 : 1540. 1803.

Perennial rhizomatous, scapigerous herbs, to 40 cm tall. Leaves in rosette at base, simple or lyrate pinnatifid or lobed, obovate-oblongate, 3-9 x 1-3 cm, lobes ovate, acute, narrowed at base. Heads few in cymes on terminal panicles, yellow, homogamous Achenes oblong, ribbed.

PLUCHEA Cassini

1. Leaves chartaceous, dentate to subentire, puberulous, innermost involucre bracts oblong **P. wallichiana**
1. Leaves coriaceous, serrate, white tomentose beneath and in younger parts, innermost involucre bracts linear-lanceolate **P. tomentosa**

Pluchea tomentosa DC. in Wight Contrib. Bot. Ind. 16. 1834; FBI 3 : 272. 1881; Gamble 2 : 690 (485). 1921.

Erect tomentose shrubs, to 1.2 m tall. Leaves sessile, elliptic-ovate, 5-8 x 2-5 cm, base apiculate, margin dentate, apex acute. Heads in terminal compound corymbs, heterogamous. Achenes oblong, ribbed, hairy.

Rare in waste lands and forests in Kurnool and Anantapur districts.

Fl. & Fr. : October - January.

Rangapuram RF (KNL), RVR 3069.

Pluchea wallichiana DC. Prodr. 5 : 451. 1836; FBI 3 : 272. 1881.

Erect woody shrubs, to 1 m tall. Leaves broadly ovate, to elliptic-obovate, 1.5-8 x 1-5 cm, base auricled, margin dentate to sub-entire, obtuse or apiculate. Heads in terminal compound corymbs, pinkish-white, heterogamous. Achene oblong, ribbed.

Rare in Rangapuram forest in Maddileti stream in Kurnool district.

Fl. & Fr. : October - January.

Maddileti stream (KNL), GO 3333.

PULICARIA J. Gaertner

1. Outer involucre bracts slender, linear-lanceolate **P. foliolosa**
1. Outer involucre bracts herbaceous, spatulate, obovate or oblanceolate :
2. Herbs diffuse to erect, to 30 cm tall, peduncle not thickened below the head **P. angustifolia**
2. Herbs erect, 50-60 cm tall, peduncle thickened below the head . . . **P. wightiana**

Pulicaria angustifolia DC. Prodr. 5 : 479. 1836; FBI 3 : 299. 1881; Gamble 2 : 702 (493). 1921.

Annual diffuse erect herbs, to 30 cm tall. Leaves oblanceolate sub spatulate or oblong, 1-2.5 x 0.3-0.8 cm, base obtuse, margin serrate, apex acute. Heads solitary, terminal, yellow, heterogamous. Achenes oblong, ribbed.